REMARKS

Claims 1 and 8 have been amended in minor fashion. Applicants believe that the claims can be examined on the merits without requiring a new search. In addition, Applicants reserve the right to pursue the original claims and other claims in this and other applications

Claims 1-5, 7 and 12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Matsuda in view of Pulvirenti. The rejection is respectfully traversed.

Claim 1 recites "a high-breakdown-voltage regulator configured to operate at a high input voltage to produce a regulated output voltage that is lower than the high input voltage." The high-breakdown-voltage regulator comprises "resistors connected in series to divide a voltage output from a transistor connected to the high input voltage." Applicants respectfully submit that the cited combination fails to teach or suggest at least this limitation.

The Office Action acknowledges that Matsuda does not teach or suggest the details of a high-breakdown-voltage regulator. Office Action at 3. The Office Action, however, implies that the prior version of the above claim limitation could be read on the Pulvirenti circuit. Office Action at 10. Applicants respectfully traverse this argument and submit that claim 1 has been amended to clarify the differences between Pulvirenti and claim 1. Pulvirenti teaches a linear voltage regulator. The Pulvirenti regulator, however, connects its power transistor M1 to a battery via a battery terminal VBAT. The battery is not a high input voltage, which is evident from the fact that Pulvirenti pumps up the battery voltage using a charge pump 2. Pulvirenti Col. 2, ll. 64-65. Thus, Pulvirenti does not connect a high input voltage to its power transistor M1 and does not cure the acknowledged deficiencies of Matsuda. Accordingly, the cited combination does not teach or suggest at least this limitation of claim 1.

Moreover, claim 1 recites that said transistor has a gate connected to an output of "a first differential amplifier circuit configured to receive a first input generated from said high input voltage . . . and a second input as a feedback voltage divided by said resistors." According to claim 1, "said first differential amplifier [is] driven by said high input voltage." As argued previously, the

cited combination fails to teach or suggest these limitations. The operational amplifier OP1 of Pulvirenti, which the Office Action characterizes as the first differential amplifier of claim 1, is not "driven by said high input voltage." On the contrary, Pulvirenti's OP1explicitly "requires a driver circuit . . . being supplied with a *higher* voltage, VCP, than the supply voltage, VBAT." Pulvirenti Col. 1, ll. 25-30 (emphasis added). This is not the same as claim 1. Furthermore, claim 1 specifically recites that the "first input [is] generated from said high input voltage." Pulvirenti, on the other hand, uses a VBG voltage as the first input. The VBG voltage is not described as being generated by the pump circuit 2. In fact, there is no disclosure or suggestion anywhere in Pulvirenti that ties the VBG voltage to a high input voltage. These are two more reasons why claim 1 is allowable over the cited combination.

Continuing, Applicants reiterate its prior argument that the cited combination does not teach or suggest the "second reference voltage generating circuit configured to receive the regulated output voltage from the high-breakdown-voltage regulator to generate a second reference voltage and a second differential amplifier circuit configured to receive the second reference voltage from the second reference voltage generating circuit to produce a drive voltage." The Office Action characterizes Matsuda's op-amp 41 as the second reference voltage generating circuit of claim 1. Office Action at 3. Applicants respectfully disagree with this characterization. As a threshold matter, neither of Matsuda's V_{cc} or V_R are regulated, as recited in claim 1. Further, Matsuda's op-amp 41 is not "configured to receive the regulated output voltage from the high-breakdown-voltage regulator to generate a reference voltage." As can be seen in FIG. 4 of Matsuda, neither of voltages V_{cc} or V_R is an input to Matsuda's op-amp 41. Matsuda, FIG. 4. Although Matsuda's V_R acts as a *supply* to op-amp 41, op-amp 41's *inputs* are generated from transistors 42 and 43 to cancel temperature variation in the output of the op-amp (Matsuda's V_{ref}). Matsuda Col. 6, ll. 20-33.

For at least these reasons, claim 1 is believed to be allowable over the combination of Matsuda and Pulvirenti. Claims 2-5, 7 and 12 depend from claim 1 and are allowable along with claim 1 for at least the reasons provided above as well as on their own merits. Accordingly, Applicants respectfully request that the rejection be withdrawn.

Claim 6 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Matsuda in view of Pulvirenti and Iravani. The rejection is respectfully traversed.

As noted above, claim 1 is allowable over Matsuda and Pulvirenti. Iravani is cited for teaching a constant current inverter circuit, and fails to cure the deficiency of Matsuda and Pulvirenti noted above. Accordingly, for at least these reasons, Applicants respectfully submit that claim 6 is allowable over the cited combination and request that the rejection be withdrawn.

Claims 8 and 11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Matsuda in view of Iravani, Negoro and Mizoe. The rejection is respectfully traversed.

Claim 8 recites limitations similar to those of claim 1. Claim 11 depends from claim 8. Accordingly, claim 8 is allowable over Matsuda for at least the reasons set forth above. Negoro is cited as teaching a diode, and does not cure the above-noted deficiencies of Matsuda or Iravani. Mizoe has been cited as teaching many limitations of claim 8, but does not cure the deficiencies of Matsuda, Iravani and Negoro. Therefore, claims 8 and 11 are believed to be allowable over the cited combination. Accordingly, Applicants respectfully request the rejection be withdrawn and the claims allowed.

Claims 9-10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Matsuda, Iravani, Negoro, Mizoe and Menegoli. The rejection is respectfully traversed.

Claims 9-10 depend from claim 8 and are believed to be allowable over the combination of Matsuda, Iravani, Negoro and Mizoe for at least the reasons provided above. Menegoli is cited as teaching forming MOSFET transistors in either enhancement or depletion mode by adjusting the surface concentration of the channel region and fails to cure the deficiencies of Matsuda, Iravani, Negoro and Mizoe. Claims 9-10 are thus allowable over the cited combination. Accordingly, Applicants respectfully request the rejection be withdrawn and the claims allowed.

In view of the above, Applicants believe the pending application is in condition for allowance.

Dated: May 18, 2009

Respectfully submitted,

By _____

Gianni Minutoli
Registration No.: 41,198
DICKSTEIN SHAPIRO LLP
1825 Eye Street, NW
Washington, DC 20006-5403
(202) 420-2200
Attorneys for Applicants